MOSES II Contract Number 68-W-99-002
Task Order Number: 005

STATEMENT OF WORK

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MOSES II Contract Number 68-W-99-002
Task Order Number: 005
STATEMENT OF WORK

1. **Title**:

Continuing Development of the EPA Certification and Fuel Economy Information System (CFEIS).

2. **Estimated Period of Performance**:

From October 01, 200~~1~~2 through September 30, 200~~2~~3.

3. **Key EPA Personnel**:

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4. **Background Information**:

a. Legal authority:

The U.S. Environmental Protection Agency's Office of Transportation and Air Quality (OTAQ), Certification and Compliance Division (CCD), is responsible for developing, administering, and determining compliance with regulations concerning motor vehicle

engine pollution emissions and fuel economy performance. Laws governing these regulations include Title II of the Clean Air Act (CAA), the Energy Policy and Conservation Act (EPCA), and the Motor Vehicle Information and Cost Savings Act (MVICSA).

b. Regulatory authority:

The Certification Compliance Program is covered by 40 CFR Part 86. The Fuel Economy Compliance Program is covered by 40 CFR Part 600. The CFEIS system supports the compliance activities covered by the regulations.

c. List of applicable background documents:

Performance under this SOW shall begin October 1, 2001~~2~~. The first set of background documents are the product control numbered documents (deliverables, working papers, etc). These documents for TO 005, MOSES I Delivery Order (DO) 68-W1-0055-095 and its predecessor DO 078 are stored at the Technical Support Center Library at the SDC. At the SDC Library, the DO 078 and DO 095 Deliverable Audit Reports are available now.

The second set of documents cover applicable agency standards, policies and guidelines for performance of the SOW. See Attachment EPA-1 for the listing. All cited documents are available at the SDC TSC Library. These documents are periodically updated: the most recent versions shall apply to TO 005.

There is one EPA form attached to this SOW:
EPA-2 Confidentiality Agreement for Contractor Employees

Attachment EPA-4 3 is an MS Project document containing a set of tables and views meeting Subtask 2.4's Cost Schedule Status Report (CSSR) requirements. This CSSR instance was delivered under DO 095 and was implemented for TO 005 in the FY1999 PoP. EPA-1, EPA-2, and EPA-3 ~~and EPA-4~~ are carried over unchanged from the FY2002~~1~~ PoP.

The following documents shall impact this project for the FY2003~~2~~ PoP:

- EPA shall implement the CAP2000 Rule's In-Use Verification Program in FY2002.
- OAR OTAQ Certification and Compliance Division Strategic Plan and Organizational Structure governs the direction in which CCD shall proceed to meets its mission, leading among other changes to the certification streamlining initiatives.

Both the CAP2000 Rule and the CCD Strategic Plan are Final. The TOPO will provide the details as they apply to the SOW to the Contractor before or during the

technical discussions for the FY2003~~2~~ PoP Project Plan.

d. Background narrative:

Compliance Program Background

The U.S. Environmental Protection Agency (EPA), Office of Transportation and Air Quality (OTAQ), Certification and Compliance Division (CCD), develops, administers, and determines compliance with regulations concerning motor vehicle and engine pollution emissions and fuel economy performance under the Clean Air Act (CAA), the Energy Policy and Conservation Act (EPCA), and the Motor Vehicle Information and Cost Savings Act (MVICSA). These activities require the study and testing of motor vehicles and engines, review and auditing of manufacturer emission and fuel economy tests, the review of a manufacturer's application for certification, the issuance of a certificate of conformity for each engine family, the calculation and approval of fuel economy label values, and the calculation of Corporate Average Fuel Economy (CAFÉ) results to determine conformance with the regulations. This involves the production, collection, and management of a variety of technical, legal, economic, and administrative data, correspondence, and reports. In addition, the 1990 amendments to the CAA has resulted in many new or revised regulations being implemented or being developed. These new or revised regulations will impact and add to the complexity of the compliance activities of the Certification and Compliance Division over the next few years.

The CAA requires that motor vehicles, prior to being distributed or offered for sale in the United States, be covered by a certificate of conformity indicating compliance with the emission standards set forth in the Act. Each model year, EPA receives approximately 470 certification requests for light-duty vehicle and truck test groups (LDV & LDT), 150 for heavy-duty engine-system (HDS) combinations, and 85 for motorcycle (MC) engine-system combinations. EPA processes these applications and makes a determination of conformance with the CAA and related regulations. If the vehicle or engine satisfies the prescribed emission standards, EPA issues a certificate of conformity for the relevant engine-system combination.

The certification process includes, application for certification review, emissions control systems durability justification review, emission-data vehicle approval and processing, and certification request processing and computer support. Other activities related to the certification process include auditing the applicant's testing and data collection procedures, laboratory correlation, and EPA confirmatory testing and compliance inspections and investigations related to certification.

Based on the above activities, CCD determines whether a manufacturer meets the CAA requirements and should thereby be permitted to market vehicles for sale in the

United States.

For LDVs/LDTs, CCD also administers the fuel economy program which includes several activities, such as fuel economy labeling and CAFÉ. These activities require EPA to do confirmatory testing of vehicles; review and audit manufacturers' vehicle and engine tests, calculations, and labels; furnish computer processing and computer programming support; and calculate fuel economy values.

Fuel economy testing and labeling activities provide fuel economy values and other labeling information. These labels are used by automotive manufacturers both to market their product and meet the requirements of the EPCA. CCD also oversees CAFÉ testing and calculation activities which are used to determine each manufacturer's compliance with the corporate average fuel economy standards specified in EPCA. Annually, CCD processes approximately 1,000 fuel economy label requests and 500 CAFÉ calculations.

These compliance activities require CCD to review, audit, and approve manufacturers' proposed emission control systems and fuel economy calculations each model year. This process involves many regulations and procedures as defined in CFR 40 Parts 86 and 600, CCD Advisory Circulars, and CCD letters to manufacturers. The process is further complicated by new and revised regulations, new technology, and new and changed vehicle and engine models each year.

IRM Support Role

Starting in 1974, CCD developed and continues to maintain a large computer system (as well as manual files and records) to support the Certification and Fuel Economy Program. Some of this information is confidential, while the remainder is public and is made available to industry, other government organizations and the public. The entire IRM support structure shall be referred to as the OTAQ Compliance Information System (CIS).

Compliance Information System (CIS)

OTAQ has placed responsibility for all OTAQ compliance programs under CCD. CCD not only enforces the pre-production certification and fuel economy provisions of promulgated rules, but also runs the downstream compliance activities as well, currently consisting of the Recall Program. Additionally, the existing CFEIS data base is already accessed by stakeholders external to CCD for a variety of purposes (various emissions testing programs, trend analyses and reports, etc). CIS provides the computer support to all these processes.

CIS Major Systems

The high level process model for CIS contains these major systems:

- Certification and Fuel Economy Information System (CFEIS)
- Motorcycle System
- Engine Information Management System (EIMS)
- Fees System
- Recall System
- Other modules as new OTAQ compliance programs are implemented.

CFEIS: supports the certification and fuel economy processes, including the manufacturer interface for the submission and validation of data for the LDVT certification and fuel economy programs, as required by regulation, the calculations and logic for determining compliance with the regulations, leading to the issuance of a certificate of conformity and fuel economy labels.

Motorcycle System: supports the certification processes, including the manufacturer interface for the submission and validation of data for the motorcycle certification program, as required by regulation, the calculations and logic for determining compliance with the regulations, leading to the issuance of a certificate of conformity.

Engine Management Information System: supports the certification processes, including the manufacturer interface for the submission and validation of data for the several engine certification programs (heavy duty, small engine, marine, etc.), as required by regulation, the calculations and logic for determining compliance with the regulations, leading to the issuance of a certificate of conformity.

Fees System: implements the Fees Rule for determination, logging and reporting the payment of fees required from the manufacturer for certification under the various programs. The compliance programs are intended to be self-funding, and the Fees Rule defines the process for cost recovery.

Recall System: supports the Recall Program, which selects and tests in-use vehicles, comparing emissions against the standards under which the vehicle and engine family was certified. The Program is defined in 40 CFR Section 85.1801 Subpart S Recall regulations, which includes CAA authorization citations. This program contributes toward the environmental goal of ozone attainment by ensuring that the emission reductions associated with Tier I certification standards are actually obtained in use.

The cited systems are all in production status. The scope of this Task Order, however, is constrained to CFEIS. Therefore, more detail on CFEIS is provided.

CFEIS Infrastructure

Parts of the CIS are found on IBM-compatible PCs and Macintosh microcomputers and the EPA laboratory real time system (LCS) located at the National Vehicle and Fuel Emissions Laboratory (NVFEL) in Ann Arbor, Michigan. Due to the nature of the certification process, much of the computer data bases and files must be maintained for ten years or more. Other records and files related to the Certification and Fuel Economy Programs are also located on the various word processing systems in use by CCD. Annually, records and documents are also shipped off-site for storage and are retrieved as needed.

For LDVT, however, the primary software piece is CFEIS. CCD uses CFEIS to administer the compliance process for certification and fuel economy. CFEIS automates much of the compliance process and frees up CCD analysts and engineers to monitor and audit a manufacturer's compliance activities, as well as to address issues, implement new regulations, and to analyze emission and fuel economy trends using the CFEIS data base. The history of CFEIS has 4 phases:

1. MTS CFEIS: Up through 09/30/96, the Manufacturers' Subsystem was based on the Michigan Terminal System (MTS), a computer timesharing system operated on OTAQ's last timesharing contract at Wayne State University in Detroit, Michigan.

2. Interim CFEIS: The migration from MTS CFEIS to IOV CFEIS (below) has a gap between the shutdown of MTS CFEIS and the cut over to IOV CFEIS in June, 1997. This gap was covered by an EPA developed standalone Summary Sheet and Certificate Program, a FileMaker Pro application running on the NVFEL's Program Management Network (PMN).

3. Initial Operating Version (IOV) CFEIS: MOSES I DO 078 initiated the re-engineering of MTS CFEIS. This effort included re-hosting it onto a Sun SPARCenter 2000 attached to the PMN, and converting the FORTRAN code and associated flat data files into a PL/SQL and ProC application working with an Oracle Data Base. DO 078 delivered IOV CFEIS Release 1.0, including the hardware installation, data base conversion, and several modules of the application. Development of Release 2.0 was started under DO 078 and completed under DO 095. Release 2.0 provided full MTS replacement functionality for CFEIS. Subsequent Releases 2.x.x incorporated numerous Minor Requirement Changes (MRC), bug fixes, and the NLEV Rule.

4. Production CFEIS: Under MOSES II TO 005, CFEIS is maintained in production status through a series of Releases and Emergency Fixes starting with Release 3.0. These Releases and Fixes implement Rules & other major certification process modifications , install MRCs, and repair deficiencies.

The CFEIS discussion in the remaining paragraphs of this section is be based on the

most recent installed and accepted production CFEIS Release. ~~(6.0~~).

Input data is submitted electronically via FTP by vehicle and engine manufacturers and/or by submission of transcribed input data sheets or key entered input at NVFEL's computer room. CFEIS retrieves and processes the submitted / key entered data and, as needed, EPA laboratory real time emission and fuel economy data. CFEIS includes many features to support the requirements in the regulations, and leads to the generation of an approved certificate of conformity which allows the vehicles to be marketed in the United States.

After a Certificate of Conformance is issued the related certification and fuel economy data is maintained in an Oracle relational data base. This data base is used for carry-over data in future years, EPA analysis projects to support the auditing of a manufacturer's certification or fuel economy program, EPA analysis projects to support regulation development, and other ad-hoc queries for external requests.

It should be noted that the nature of the certification and fuel economy program requires upgrades to the CFEIS for each automotive model year. As new regulations are promulgated further revisions and enhancements to the CFEIS are required. Thus the CFEIS is constantly changing and must remain compatible for the current and previous model years. Further, the Clean Air Act (CAA) of 1990 requires the implementation of many new regulations over the next few years. As a result, extraordinary changes to the CFEIS will be required over the next few years as these CAA regulations are implemented. The CFEIS is a dynamic information system which must quickly respond to ever changing requirements.

Broad Requirements:

The tasks below will start upon completion of TO 005 FY200~~1~~2 PoP and issuance of a MOSES II Task Order modification approving the FY200~~2~~3 Project Plan. ~~The major tasks are the completion of CFEIS Releases 6.3 through 6.5 and an upgrade in Oracle and Solaris software tools.~~ EPA requires the following non-severable tasks (turn to cited task number's section for detailed requirements) to be completed:

- ~~Upgrade the Oracle and Solaris products used with CFEIS. (Task 3)~~

- Repeat the Y2K IVV test runs prior to the installation of each Release. Analyze any resulting deficiencies, recommend solutions and, upon TOPO authorization, implement them. (Task 7)

- Update the Requirements Traceability Matrix to represent CFEIS Releases ~~6.5~~. The revised RTM shall include all requirement changes (including those issued as SPCRs) under Tasks 9 through 11. (Task 8)

- Update the implementation of the Vehicle Emissions Guide web site. The Guide uses CFEIS data to inform the public of new vehicle emissions ratings. (Task 9)

- Implement certification streamlining initiatives in CFEIS Releases 7.3 ~~6.3~~. These initiatives will automate certification processes currently done manually, extending CFEIS support to the entire pre-production certification cycle. (Task 11)

- Update CFEIS to agreed upon Release number by TOPO and TPL ~~Release 6.4~~. This release ~~6.4~~ shall implement the CAP2000 Rule's In-Use Verification Program.. (Task 12)

- Make the changes required for Model Year 2005 ~~2004~~ certification. The changes shall be phased in through a series of incremental Releases culminating in Release ~~6.5~~ The incremental Releases shall include minor repairs and revisions to CFEIS. (Task 13)

- Update the ACGM process, so that certificates and summary sheets are generated in .pdf format and emailed to designated signees.

- Enhance IOV interface, so that it is web-based and can be accessed through web browser, such as Netscape v 4.77.

- ~~Set up a means for the SDC developed system to be used as a disaster recovery site for CFEIS, which will entail the ability to restore from the EPA identified backup or export files. A replication of the CFEIS dial-in server will not be needed. The intention is initially for internal EPA use only.. (Task 3).~~

- Implement a small volume template that will allow for manufacturers to interactively submit data to CFEIS through html-based pages on the internet.

e. General Methodology:

All work shall be performed under the general technical direction of the TOPO. Background information and required data will be provided by the TOPO. The Contractor shall notify the TOPO in writing immediately of any issues requiring EPA management decisions. The TOPO will issue all technical direction in writing by using fax, EPA e-mail, transmittal letters, or by signing acceptance of Contractor prepared Minutes of CCBs, Technical Issues Meetings, or Teleconferences. The Contractor shall not accept technical direction unless it is in writing from the TOPO and cc'd to the MOSES II Project Officer (PO) or received in the context of a documented CCB/teleconference.

Contractor staff shall develop technical strategies in concert with the TOPO. The

Contractor shall apply the program expertise gained in the development and implementation of CFEIS (providing a seamless transition from the FY2002 ~~FY2001~~ PoP to FY2003 ~~FY2002~~ PoP of TO 005, assuming there is no gap between the two). All delivered material will be reviewed by the TOPO and other designated staff. Comments will be compiled by the TOPO and returned in writing to the Contractor. The contractor and the TOPO shall agree on the turnaround time both for the review by EPA and revisions by the Contractor to accommodate the review. The Contractor shall factor in these times in all proposed schedules. The deliverable production and revision process itself shall be governed by the SDC's SEE, as described in the Procedure 1 Briefing.

The contractor shall comply with applicable agency standards, policies and guidelines during the performance of this task. See Attachment EPA-1 for the listing (which also details the SEE). The contractor can propose in the Project Plan modifications to this list.

This Task Order requires comprehensive system life cycle services as described in the 68-W-99-002 Contract Statement of Work, under Section 3.0, Functional Requirements.

All software development tools including operating systems, hardware configuration and LAN modules and tools such as command languages and command language processors, programming languages and language processors, CASE tools, software library managers, commercial software libraries including object class libraries, application programming interfaces (APIs), graphic user interfaces, data base management systems, file management systems, front end tools, and commercial software applications must be compatible with the CFEIS production environment at NVFEL. Subsequent to acceptance of the deliverables of this SOW, EPA will have operational and at least partial maintenance responsibility for the production systems. The EPA Information Management Group (IMG) ~~Systems Team (IST)~~ will be required to utilize for the most part the software tool set employed by the Contractor. Hence, the TOPO will consider deployment at NVFEL and tool usability by the EPA ~~IST~~ IMG as part of the acceptance criteria for the Project Plan, although under the new property rules, the TOPO no longer directly approves the property proposed for performance of the SOW.

f. Applicable contract sections:

All terms of the MOSES II contract are in force for the work to be performed under this Task Order. This Statement of Work falls within the scope of the Contract Statement of Work related specifically to Sections

3.1.1 - Analysis,

3.1.2 - Design,
3.1.3 - Development and Testing,
3.1.4 - Implementation,
3.2 - Project Management,
3.2.1 - Technical Support,
3.2.2 - Software Engineering Process (SEP)
3.3.1 - Training Services for EPA employees
3.3.2 - Independent Verification and Validation (IV&V) Support
3.3.5 - Data Management Services
3.3.6 - Briefings
3.3.7 - Task Order Close Out.

g. Where work is to be performed: Reference 3.2.4 of the Contract Statement of Work (SOW).

The contract requires development work normally to be conducted at the Systems Development Center (SDC). Change Control Board (CCB) meetings are to be conducted at the SDC or by teleconference. If the work requires other locations, the contractor shall prepare a written justification to the TOPO, CO, and PO explaining why the SDC is not being used, and identifying the locations where the work is to be performed, and the type of activities expected at each location. The Contractor is expected to make every effort to minimize cost, particularly those associated with travel.

5. **Purpose and Scope**:

The overall purpose of this Task Order is to obtain contractor support for updating CFEIS to support the evolving information processing needs of the Certification and Fuel Economy Programs. The primary objectives are the:

- Upgrade and maintain the ~~Oracle and Solaris~~ software products used with CFEIS. (Task 3)

- Check (using the IVV Test Suite) for and fix Y2K deficiencies prior to Release installation. (Task 7)

- Keep the CFEIS Requirements Specification current by updating the Requirements Traceability Matrix (Task 8).

- Update the implementation of the Vehicle Emissions Guide web site. (Task 9)

- Implement certification streamlining initiatives (Task 11). These initiatives will

automate certification processes currently done manually, extending CFEIS support to the entire pre-production certification cycle.

- ~~Add~~ Continue support for the CAP2000 Rule In-Use Verification Program to CFEIS. (Task 12)

- Update the ACGM process, so that certificates and summary sheets are generated in .pdf format and emailed to designated signees.

- Enhance IOV interface, so that it is web-based and can be accessed through web browser, such as Netscape v 4.77.

- Set up a means for the SDC developed system to be used as a disaster recovery site for CFEIS, which will entail the ability to restore from the EPA identified backup or export files. A replication of the CFEIS dial-in server will not be needed. The intention is initially for internal EPA use only.. (Task 3).

- Implement a small volume template that will allow for manufacturers to interactively submit data to CFEIS through html-based pages on the internet.

- Outside of Rules, maintain (Task 14 ~~13~~) the "currency" (ability to meet evolving requirements of the LDVT regulatory compliance program) of CFEIS, which shall accept and process data in support of Model Years 2002, 2003 and 2004 Manufacturer Certification and Fuel Economy applications, using as the FY2002 baseline Production CFEIS Release 6.2 and following written specifications provided by the TOPO.

- Repair of system, application, or data base deficiencies, SPCR Items of Status "Open" or "Analysis" (also in Task 13). This task will be critical during the peak production months of May through September. SPCRs will be written to cover all "incidents" identified by EPA during production processing and conveyed in writing by the TOPO to the Contractor. SPCRs also shall be written by the Contractor, when problems are uncovered during unit and system tests.

Note:

- This TO's SPCR data base will begin with the TO 005 SPCR data base as of the completion of the FY2002~~1~~ PoP, purged of all canceled or closed items.

6. **Statement of Work Requirements**:

Change Control Board (CCB) and technical issues meetings are to be conducted at either the SDC or by teleconference. The following significant events shall be discussed at these meetings:

Significant Events

Milestones for the CFEIS project through 09/30/2002~~1~~:

- 11/01/1996 Developmental IOV CFEIS Release 1.0 installed.
- 11/01/1996 MTS CFEIS data converted to IOV CFEIS format.

- 06/03/1997 IOV CFEIS Release 2.0 installed.
- 06/20/1997 Interim CFEIS shut down.
  IOV CFEIS handles all certification and fuel economy requirements.
- 09/15/1999 Production CFEIS Release 4.0 installed, completing Compliance Assurance Program <for implementation in MY> 2000 (CAP2000) Rule implementation and some SFTP requirements.
- 06/29/2000 Production CFEIS Release 4.2.1 installed, completing implementation of SFTP Rule requirements.
- 06/07/2001 Production CFEIS Release 6.0 (Tier 2 Rule) installed.
- 09/17/2001 Expected completion date for CFEIS Release 6.2 (MY2003)

Key FY2002 milestones for the CFEIS project, impacting the TO 005 ~~FY2002~~ PoP:

- ~~03/20/2002 Requested completion date for CFEIS Release 6.3 (Cert Streamlining)~~
- ~~06/19/2002 Requested completion date for CFEIS Release 6.4 (CAP2000 In Use)~~
- ~~09/18/2002 Requested completion date for CFEIS Release 6.5 (MY2004)~~

TASK Description, Deliverables and Acceptance Criteria:

TASK 1 - PROJECT PLAN DEVELOPMENT

SUBTASK 1.1 - INITIAL PROJECT PLAN DEVELOPMENT

DESCRIPTION:

Upon issuance of this Task Order, the Contractor shall develop a Project Plan including technical approach, estimated resources, staffing, deliverables, schedule, and cost estimate addressing requirements of the Statement of Work (SOW).

Until issuance of a modification to this Task Order stating the Government's acceptance of the Project Plan, and establishing the ceiling price for the work ordered, the Contractor shall not proceed with any other work contained in the SOW.

Contractor development of the Project Plan shall be performed in accordance with the procedures

established for the Software Engineering Process (SEP) Section 3.2 of the contract SOW, and with procedures established in the current Task Order providing for the general technical management and administration of the Systems Development Center (SDC).

DELIVERABLES

1.1.1 Project Plan

ACCEPTANCE CRITERIA

Reference Section 9 .

SUBTASK 1.2 - MAINTAIN THE PROJECT PLAN

DESCRIPTION:

The Contractor shall update the project plan when requested by the CO. The project plan may be modified to accommodate new requirements that arise during the term of the project. These requirements must fit within the scope of the Task Order and the period of performance. Minor deviations from the specifics of the Project Plan that have been mutually agreed upon by the TOPO and Technical Project Leader will be documented in the Change Control Board (CCB) minutes in lieu of Project Plan modifications.

DELIVERABLES

1.2.1 Updated Project Plan

ACCEPTANCE CRITERIA

Reference Section 9.

SUBTASK 1.3 - REVISE PROJECT PLAN

DESCRIPTION:

In the event that the TOPO determines that the SOW for the Task Order requires modification to: (1) add or delete a task or deliverable; (2) change the period of performance when crossing fiscal years; or (3) increase or decrease the available resources to support the effort, the revised SOW will be provided to the contractor by the Contracting Officer, so that the approved Project Plan can be modified to reflect the revised SOW. As with Subtask 1.1, Contractor revision of the Project Plan shall proceed in accordance with all approved SEP and SDC procedures.

DELIVERABLES

1.3.1 Revised Project Plan

ACCEPTANCE CRITERIA

Reference Section 9.

TASK 2 - PROJECT MANAGEMENT

SUBTASK 2.1 - MANAGE THE TASK ORDER

DESCRIPTION:

The Contractor shall manage the Task Order Project Team, and modify the approved Project Plan to reflect minor changes that do not require Contracting Officer approval.

DELIVERABLES

2.1.1 Product Assurance Plan
2.1.2 Documentation of CCB Minutes
2.1.3 Monthly Technical and Financial Reports

ACCEPTANCE CRITERIA

Reference Section 9.

SUBTASK 2.2 - CLOSE-OUT OF THE TASK ORDER

DESCRIPTION:

The Contractor shall provide for the close-out of the Task Order at the end of the period of performance.

SUBTASK 2.3 - TRANSITION

DESCRIPTION:

2.3 The work performed under this Task Order is vital to the Government and must be continued without interruption. Upon contract expiration a successor, either the Government or

another Contractor, may continue this work. The Contractor shall provide a transition plan for the transition of work to EPA or another contractor. The transition plan which contains four major sections, shall provide for a cooperative effort (among EPA and follow-on contractor), and shall include at a minimum an inventory of documentation to be turned over to EPA, schedule of turnover, a description of parallel operation and recognition of security issues that includes an updated list of contractors to be removed from all RACF groups, profiles, etc. (if applicable). Training support for the successor is anticipated, and will be coordinated in advance by the TOPO. The Contractor shall provide sufficient experienced personnel during the transition period to ensure that the services called for by this contract are maintained at the required level of proficiency.

The Contractor shall prepare a transition plan upon written request of the CO. The TOPO will review the plan and if the plan is acceptable, forward it to the Contracting Officer for approval. The Contractor shall not prepare a cost estimate or any portion of the transition plan (including PA) until notification is received from the Contracting Officer.

2.3.1 Documentation Task Order Inventory

The Contractor shall conduct physical inventory of the project and team libraries for systems documents, life cycle documents, and other documentation (e.g., COBOL manuals, third party software). Reconcile inventoried documentation with that listed in the SOW (if applicable). Review the status of all products. Update the PA Deliverables Accountability Report. Arrange for the return of needed documentation and disposal of all unwanted documentation. Ascertain the format documentation will be delivered in (e.g., hardcopy, softcopy, Lotus Notes, WordPerfect - current EPA version).

General: The Contractor shall create an acceptance criteria checklist that will be used to track the successful completion of the transition of work to a successor. Establish with TOPO the timing and schedule transfer (i.e., phase out or bulk transfer).

2.3.2 Transition of Security

The contractor shall conduct the following activities in the Transition Plan:

Produce a Security Transition Plan. Provide a list of mainframe and/or UNIX accounts associated with the Task Order. Provide the names of the contractor employees with access to the aforementioned mainframe and/or UNIX accounts. Provide the names of all contractor employees with access to Lotus Notes system(s). Document any additional security procedures needed for or involved in applications (e.g., library accesses, tables). Ascertain which contractor staff have EPA Headquarters badges that must be returned. Discuss security issues with EPA SDC Information Security Officer. Determine if debriefings on the Privacy Act information are appropriate for the Task Order.

2.3.3 Training EPA and Designated Contractor

A major factor in the successful transition of the Task Order to EPA and/or the designated contractor is training. To facilitate training, the Contractor shall develop a Transition Plan which shall include (at a minimum) a Training Plan identifying specific training sessions, objectives, and curriculum. Each session should delineate what training will occur, and appropriate documentation provided.

2.3.4 Management and Scheduling

The Contractor shall review transition plan activities and schedules based on the time available to conduct the transition. Review schedules to ensure that they reflect the transition dates reflected in the SOW (if applicable); and monitor priorities and schedules relative to the Transition Plan to identify potential conflicts. Notify the TOPO when conflicts are identified.

DELIVERABLES:

2.3.1 Transition Plan:

Documentation, Security, Training and Management.
Document Inventory and Disposal
Training Materials
Security Plan
Schedule of Transition Activities
Transition Results Report

ACCEPTANCE CRITERIA

Reference Section 9.

SUBTASK 2.4 - TRACK COST SCHEDULE STATUS

DESCRIPTION:

In addition to the contract mandated budget and schedule oversight and monthly report (delivered under Subtask 2.1), the contractor shall maintain and report a more detailed accounting of cost and schedule status. The object of the tracking shall be not only to account for costs incurred and schedule achieved, but also to keep a current forecast on expected budget required and schedule remaining to completion of each task. Adverse deviations (over budget or behind schedule) of 10% or higher against the plan for SOW Tasks, Project Plan Scheduled Deliverables, and CSSR internal milestones are variances for which the Contractor must account and provide a "Get Well" Plan (how the Contractor intends to recover within the PoP and budget of the TO) in the text section of the CSSR format. The 10% variance trigger can be adjusted by written

notification from the TOPO.

This effort is intended to serve as a proactive project management tool, supplementing the procedures and processes already in place at the SDC under the MOSES II contract. For example, under current MOSES procedure a schedule slippage on a deliverable with a firm delivery date in the Project Plan Schedule of Deliverables must be reported by the TOPO through the PO to the CO. The TOPO via this Subtask will acquire the quantitative and qualitative information needed both to describe the situation and decide on what solution to recommend to the PO and CO. If the Get Well Plan shows that the Contractor can not recover within the constraints of the current TO and Project Plan, then the TOPO has the basis on which to request a TO Modification to get a revised Project Plan. Upon execution of the Modification, the Contractor would then update the CSSR baseline to reflect the revised Project Plan.

At each Change Control Board (CCB) meeting, the contractor shall deliver a Cost Schedule Status Report (CSSR). This Report shall include, as a minimum:

1. Schedule status: actual and projected progress by task, by deliverable, by milestone compared against the planned schedule for the Task Order in both tabular and graphical format, with all instances of being behind by 10% or more flagged as schedule variances;

2. Budget status: actual and projected hours expended and costs by task by deliverable by milestone compared against planned budget for the Task Order in both tabular and graphical format, with all instances of being over by 10% or more flagged as budget variances; and

3. A written breakdown for each task of monthly activities, progress, realized or anticipated problems, and, for each identified problem, proposed resolution. The Get Well Plan for the identified variances shall be placed here.

A set of MS Project tables and views meeting the above requirements was developed under MOSES DO 95. A copy of the most recently delivered instance is contained in Attachment EPA-3. For purposes of estimation, the Contractor shall assume all DO95 views are retained. The format and WBS of Attachment EPA-3 as modified by the Contractor to accommodate the differences between DO 95 FY1999 tasks and subsequent TO 005 PoP's tasks is to be updated for the FY2003 ~~FY2002 SOW~~ changes only, unless written authorization for changes is provided by the TOPO. For example, the CSSR will thus build and track new Tasks 14 and 15 ~~Tasks 12 and 13.~~ The Contractor can request a decision to reduce or modify the views. The Contractor shall propose and obtain TOPO concurrence in writing to these format and content changes, including any reduction in or modification to the "views", prior to the delivery of the first CSSR instance, baselined on the accepted Plan, at the first FY2003~~2~~ TO 005 CCB. The contractor shall provide an accurate roll-up of projects by task and cumulation of all tasks.

DELIVERABLES

2.4.1 Cost Schedule Status Reports

ACCEPTANCE CRITERIA

Reference Section 9.

TASK 3 - CONFIGURATION MANAGEMENT AND SYSTEM / DATA BASE ADMINISTRATION AT SDC

DESCRIPTION

The Contractor shall perform Configuration Management (CM) of the software and other deliverables to be developed under this SOW. This activity shall include version control on all software, cataloging, and tracking of all documentation received from EPA, and tracking of all modifications and change requests to the deliverables. The Contractor shall propose a CM Plan. This Plan shall cover the described activity and adhere to SEE procedures. The Plan shall also provide for EPA programmers checking out modules from the SDC, modifying them at the NVFEL, and checking them back into SDC for subsequent Product Assurance testing. Finally, the Plan shall account for the Oracle and Solaris products upgrade described below.

The Contractor shall identify requirements for and provide (except for inventory transferred from DO 68-W1-0055-095) the hardware and software needed at the SDC for this TO. The Contractor shall perform system and data base administration on this hardware and software. This administration shall be accounted for under Task 3.

~~One specific deliverable in this area is the Oracle and Solaris products upgrade. To utilize new tools and increase performance, EPA has decided to upgrade the CFEIS server (Sun Sparc2000) at NVFEL to run on Solaris 7 and Oracle 8i. SDC and NVFEL need to be in synchronization on COTS software versions, to assure compatibility of the delivered code and resulting data base. Therefore, The Contractor shall implement under Task 3 the installation of these versions at the SDC, including any review and updating of CFEIS due to deployment of these versions.~~

~~Specifically, SAIC shall need to do the following:~~
~~a. Upgrade the CFEIS operating system software at the SDC to Solaris 7.~~
~~b. Upgrade The CFEIS Oracle RDBMS at the SDC to Oracle 8i.~~
~~c. Test and make appropriate modifications to the CFEIS application to run in the updated SDC environment.~~
~~d. Test and install the modified CFEIS application on the correspondingly updated NVFEL CFEIS server.~~

The Contractor shall provide advisory assistance for the CFEIS system and data base administration performed by EPA at the NVFEL. The Contractor shall analyze and recommend

action(s) to resolve system and data base issues referred in writing to the Contractor by the TOPO using the SPCR process. The Contractor shall recommend hardware and software changes needed to allow EPA to program module modifications in accordance with the CM Plan.

DELIVERABLES

3.1 Configuration Management Plan Scheduled completion date - TBD
~~3.2 Oracle and Solaris Products Upgrade~~

ACCEPTANCE CRITERIA

Reference Section 9.

TASK 4 - CFEIS RELEASE 3.0

Task 4 was completed in the FY1999 PoP of TO 005. Task 4 is therefore closed in the FY2002 PoP.

TASK 5 - FY99 CFEIS MAINTENANCE

Task 5 was completed in the FY1999 PoP of TO 005. Task 5 is therefore closed in the FY2002 PoP.

TASK 6 - FY00 CFEIS MAINTENANCE

The 1st Task 6 was deleted prior to the FY2000 SOW revision. The 2nd Task 6 is the FY2000 successor task to Task 5 and is therefore closed in the FY2002 PoP.

TASK 7 - THE YEAR 2000 (Y2K) AND 508 COMPLIANCE

The Year 2000 (Y2K)

In Task 12 of the predecessor Delivery Order 68-W1-0055-095, CFEIS was assessed for Y2K compliance. Two minor deficiency SPCRs were identified and implemented. In the opinion of the contractor's Y2K Report, installation of those changes made CFEIS Y2K compliant. CFEIS was in the 2nd quarter of FY1999 IVV tested for formal certification under a separate DOT IAG. The contractor provided information on CFEIS and executed test runs in support of the certification process, as specified in Attachment 5. For the FY2002 PoP, the contractor shall include the same test runs as part of the PA system testing prior to delivery of Releases of CFEIS.

Any deficiencies identified by the testing and concurred upon by EPA shall be repaired under Task 7 of this TO. The contractor shall analyze the cited deficiencies and recommend solutions. Upon TOPO authorization, the contractor shall implement the recommended solutions either in the next Release or as an Emergency Fix, depending on the TOPO direction in writing. ~~For estimation purposes, expect only minor repairs.~~ For cost estimation purposes, the contractor shall expect only minor repairs.

Section 508 Assessment of CFEIS

The contractor shall perform a Section 508 assessment of CFEIS at the written direction of the TOPO or ATOPO. The assessment will describe the level of compliance with the accessibility requirements of Section 508 of the Rehabilitation Act and will be summarized in the CFEIS Section 508 Assessment Report. The analysis in the report will describe a definition of the CFEIS requirements changes and level of effort necessary to bring CFEIS into compliance. The resulting requirements will be documented as SPCRs in the CFEIS Problem Tracking Database for analysis, prioritization, and potential inclusion in a scheduled CFEIS release.

DELIVERABLES

7.1 Y2K Certification Test Runs - Schedule dates to TBD
7.2 Y2K SPCR(s) Implementation - Schedule dates to TBD
7.3 CFEIS Section 508 Assessment Report - Schedule dates to TBD

ACCEPTANCE CRITERIA

Reference Section 9.

TASK 8 - UPDATE THE REQUIREMENTS TRACEABILITY MATRIX

DESCRIPTION

For FY2001 PoP, the Contractor began Task 8 on July 2, 2001. ~~For FY2002 PoP, the Contractor shall begin Task 8 on July 1, 2002.~~ For FY2002, the contractor began Task 8 in the preparation of In Use Verification. This led to a more productive discussion of requirements before project began. ~~We~~ CCD expect that this would continue and RTM updates would occur prior to work beginning and updated as changes occur. The Contractor shall update the Requirements Traceability Matrix for CFEIS. The RTM baseline shall be the Updated Requirements Traceability Matrix delivered under Task 8 in the previous PoP, as revised per EPA review comments. The Contractor shall update the RTM to represent the current requirements for CFEIS, as authorized by the TOPO in writing through the SOW and the SPCR process. EPA shall provide to the Contractor prior to the Task 8 start date the latest version of the CFEIS Manufacturers' User Guide (CMUG). The CMUG and RTM should be in synchronization on the

functionality of CFEIS. EPA has the responsibility for any updates to the CMUG.

DELIVERABLES

8.1 Updated Requirements Traceability Matrix - Schedule dates to TBD

ACCEPTANCE CRITERIA

Reference Section 9.

TASK 9 - AUTO EMISSIONS WEB SITE and CFEIS-RELATED WEB DEVELOPMENT

The auto emissions web site is currently titled "Green Vehicle Guide" (GVG). GVG is located at www.epa.gov/greenvehicles. GVG provides to the public the criteria pollutant emissions and fuel economy ratings of new vehicles, including side-by-side vehicle comparisons. The ratings are based on the standards under which the vehicles are certified via CFEIS to be in compliance and the sales location entered by the user. The data used is either from the CFEIS data base or derived from CFEIS data. Additionally, considerable text information is supplied explaining what the numbers mean and why the public should be concerned over vehicle emissions and fuel economy.

EPA staff designed and executed the initial static page implementation of the Guide. EPA shall continue to maintain with its own staff the static page implementation on the NTSD Mountain public access server.

There shall be 3 ~~2~~ types of deliverables for Task 9. First, the Contractor shall provide consultation and analysis on web site design issues and proposals concerning the Green Vehicle Guide, and other CFEIS-related web development. Second, the Contractor upon approval by the TOPO shall implement changes to the Guide web site, following NTSD procedures.

Third concerns the addition of web screens for the needed interactive processes. Currently, data updates and the generation of customized reports on certification and fuel economy data, test group certificates and CAFE confirmation letters are done by connecting to the Unix server through the use of Exceed Hummingbird software and opening the CFEIS interactive screen which is a text-based screen. The functions described above should be made available through a Web browser screen.

The Contractor shall propose in the Project Plan the process for supporting these changes, covering a degree of difficulty ranging from "patch" jobs (such as moving a field's location on a screen) to a major information requirement change. The plan should balance sustaining web site implementation integrity with minimizing the overhead associated with making the change. In the context of the balance caveat, use of existing applicable SDC standards and guidelines (as cited in

Attachment EPA-1) is required (do NOT reinvent the wheel), unless an exemption is granted by the TOPO in writing.

The Contractor shall perform repair of implementation deficiencies and minor specification changes identified and categorized in the Software Problem Change Report (SPCR) data base, prioritized in writing by the TOPO, and executed according to the SDC SEE procedures.

The Contractor shall, for the Project Plan, assume for Task 9

- maintenance continues without interruption throughout FY200~~1~~2 (i.e., in parallel (and coordinated) with the other tasks,
- a stated size and severity mix of SPCRs,
- the total Task 9 effort for FY2003~~2~~ does not exceed the ceiling estimated in the Plan for Task 9 in the FY2001 PoP Project Plan.
- ~~SAIC performs all the work.~~

DELIVERABLES

9.1 Auto Emissions Web Site design analyses - Schedule dates to TBD
9.2 Auto Emissions Web Site modifications - Schedule dates to TBD
9.3 Conversion of IOV screens to HTML screens and related web development - Schedule dates to 06/21/2003

Note: each installation of a Release (set of modifications to the GVG or web development) shall be accompanied by Release Notes as a separately tracked deliverable. The Release Notes shall follow SEE prescribed format and content. Emergency Fixes shall be documented in the Release Notes accompanying the next Release. If no next Release is scheduled, a final Release Notes shall be issued capturing all Fixes between the last Release and the end of the PoP.

ACCEPTANCE CRITERIA

Reference Section 9.

TASK 10 - FY2001 CFEIS MAINTENANCE

Task 10 is the FY2001 PoP successor task to Task 6 and is therefore closed in the FY2002 PoP.

TASK 11 - CERTIFICATION STREAMLINING

One tactical goal of the new Certification and Compliance Division is to streamline pre-production certification processes, in order to shift resources into new compliance programs. Task 11 covers IT initiatives in support of the streamlined processes, leveraging and augmenting

the existing CFEIS infrastructure. Task 11 was begun in the FY2001 PoP. For the FY2002 PoP, the Contractor shall maintain the streamlining processes previously implemented and deliver one new process.

The Contractor shall begin Task 11 as defined below on October 1, 2001~~2~~, or upon issuance of the modification to the TO implementing the accepted Project Plan for this SOW, whichever is later. For the FY2003~~2~~ PoP, the Contractor shall maintain Electronic Application Processing, and Automated Certificate Generation by Manufacturers ~~and CAP 2000 In-Use Verification Program.~~ The Contractor shall also deliver Automated Confirmatory Test Selection. Requirements for these initiatives are outlined below, with further refinement to be provided when requested by the Contractor.

Electronic Application Processing (EAP):

EAP was delivered in the FY2001 PoP. EAP automates the submission of electronic versions of the portion of the application for Certificate of Conformity formerly provided hard copy. EAP does the storage step into the file server and systematically tracks the electronic package location and contents, using a tag record (based on the application cover sheet). All other information characterizing the Application can be extracted from CFEIS using the tag record.

Automated Certificate Generation by Manufacturers (ACGM):

ACGM was delivered in the FY2002~~1~~ PoP. The ACGM module allows manufacturers to request (through a batch interface) to generate a certificate for a given SSIN. ACGM permits manufacturers to make updates to existing certificates. Under ACGM, the manufacturer can only issue a certificate if not blocked by the gate-keeper table, meets certain error checks, and the SS has the Application Part1 flag switched on.

ACGM is based on the existing certificate-generation module. The current program to issue certificates by EPA Certification Representatives is retained and continues to work regardless of errors or blocks or lack of applications received.

~~Electronic Signatures and the authentication checks that accompany them shall be added to ACGM to provide certificate signing and eliminate the need for hardcopy certificates by EPA~~

Automated Confirmatory Test Selection (ACTS):

ACTS shall determine if a confirmatory test at EPA is required for a vehicle configuration. Each vehicle configuration shall be considered for possible EPA testing. Different test procedures shall be considered separately.

1. ACTS shall reach its decision based on these criteria -- checked in the order listed:
   - the response to certain questions which the manufacturers answer (approx. 3 or 4);

- comparison to a table with certain conditions specified; and
- a random algorithm at a specified rate (initially set at 10%) which will be stored in a table so that it can be modified.

2. Process:
   - The manufacturer shall submit a data record "request" via the dial-up modem to an established drop box. [the record contains a reference to the vehicle configuration and test procedure, answers to the questions ('Y' or 'N'(default)), the date available for testing, a flag indicating whether additional fans will be needed for the test ('Y' or 'N'(default)), an 'additional fan' comment field, mode number (1 (low) or 2(high)), shift indicator light (SIL) flag ('Y' or 'N'(default)), and the name of the Certification Representative].
   - As with existing batch requests, CFEIS shall poll the dial-in server on a bi-hourly basis, processing any ACTS requests in the drop boxes.
   - A response to test/waive the vehicle would be placed in the manufacturers out-box. If a vehicle is selected for testing, then all the VI information needed for the EPA LOD test request program should be reported for the selected vehicle, as well.
   - For vehicles that are selected to be tested by ACTS, ACTS shall format a report (following the requirements of the existing EPA LOD test request program) and transmit the report to LOD..
   - ACTS shall send electronically to the Certification Representative a copy of the decision to test a vehicle (i.e. the same report that the manufacturer received).

3. Prior to receipt of these "requests", the team member may set a code to test a certain vehicle by
   - VID, or,
   - Vehicle Configuration Number, or,
   - all members of a Test Group, or,
   - the first vehicle submitted for a certain test group for a specified test procedure, or,
   - all vehicles for a specified manufacturer, or
   - percentage (e.g. 30%) of all vehicles for a specified manufacturer, or,
   - the first vehicle submitted for a certain test group for a specified manufacturer, or,
   - the first vehicle submitted for a specified test procedure.

The random rate may be different for different manufacturer and may change periodically. A method to change the random rate for all manufacturers and for specific manufacturer must be provided.

A count should be kept for the number of waiver requests by manufacturer and year were received and the number of those that were selected for testing.

Maintenance of implemented certification streamlining processes (including ACTS, after it is installed) shall follow the procedures established for maintenance of the rest of CFEIS. I.e., EPA may request that the Contractor shall perform repair of software deficiencies ("bug hunts") and minor specification changes (field defaults, code table updates,...) identified and categorized in the Software Problem Change Report (SPCR) data base, prioritized in writing by the TOPO, and executed according to the SDC SEE procedures. Maintenance SPCRs shall be delivered in the next scheduled CFEIS Release, unless the TOPO requests in writing that an Emergency Fix be executed.

The Contractor shall, for the Project Plan, assume for Task 11

- all detail necessary to design and implement the Initiatives shall be provided in writing by the TOPO and / or through the CCB process;
- no data conversion shall be required for implementation;
- a stated size and severity mix of SPCRs for installed Initiative maintenance; and that
- SAIC performs all the work.

DELIVERABLES

11.1 ~~Release 6.3: Automated Confirmatory Test Selection - Schedule dates to TBD~~
Maintenance related to Certification Streamlining Tasks - Schedule dates to TBD

Note: each installation of a Release (set of software modifications to CFEIS) shall be accompanied by Release Notes as a separately tracked deliverable. The Release Notes shall follow SEE prescribed format and content, plus append the results of the Task 7.1 IVV tests run. Emergency Fixes shall be documented in the Release Notes accompanying the next Release. If no next Release is scheduled, a final Release Notes shall be issued capturing all Fixes between the last Release and the end of the PoP.

ACCEPTANCE CRITERIA

Reference Section 9.

TASK 12 - CAP2000 RULE : IN-USE VERIFICATION PROGRAM

The initial phase of IUVP was delivered in FY2002. IUVP was the implementation of the support needed to comply with the CAP2000 Rule In-Use Verification Program. Added fields and tables were created. This is the first project that we had requested the use of comma-delimited format as opposed to fixed format. ~~We~~ CCD also requested a Web interface so that manufacturers could submit data through the web.

The Contractor shall begin the web interface phase of Task 12 on October 1, 2001, or upon issuance of the modification to the TO implementing the accepted Project Plan for this SOW,

whichever is later. Task 12 implements support in CFEIS for the In-Use Verification Program (IUVP) called for by the CAP2000 Rule.

CFEIS shall be modified to input, store and retrieve emission and basic test vehicle information for various in-use programs organized under the test group name:

- The emissions data shall include THC, NMHC, NMOG, CO, NOx, HC+NOx, HCHO, CO2, part, FE emissions, disposition (pass/fail/void), SIL (may be optional), Trans mode, fuel used, test date, test number, test procedure (see below), Bag number (for FTP, see below) and test comments.
- Test procedures include: FTP, HWY, US06, SC03, Evap-2day, Evap-3day, Refueling, and ColdCO. For the FTP test, separate Bag1, Bag2, Bag3, and composite emissions shall be required.
- Vehicle descriptions shall include VIN, odometer, age, test group, lab, emission program, transmission, engine code, axle ratio, ETW, investigation number, and vehicle comments.
- The CFEIS database shall support alternative and dual fuels. Disposition of the test "Pass", "Fail", "Void" shall be either determined by program or entered with the data (process TBD).

Reports shall include a summary of emission results by test group, by lab, in use emission program (i.e.- EPA recall test data, Mfr in-use test data), by manufacturer, by model year, by a range of test dates, or combination of these parameters. Comparisons of emissions between certification results (in the current CFEIS database) and the in use data shall be supported. The program shall support data export of TBD fields suitable for excel data sheet importation and analysis.

The Contractor shall, for the Project Plan, assume for Task 12

- no data conversion shall be required for implementation of CAP2000 IUVP;
- a stated size and severity mix of SPCRs; and that
- SAIC performs all the work.

DELIVERABLES

12.1 Release of : CAP2000 Rule In-Use Verification Program Web Interface - Scheduled 01-10-2003

Note: each installation of a Release (set of software modifications to CFEIS) shall be accompanied by Release Notes as a separately tracked deliverable. The Release Notes shall follow SEE prescribed format and content, plus append the results of the Task 7.1 IVV tests run. Emergency Fixes shall be documented in the Release Notes accompanying the next Release. If no next Release is scheduled, a final Release Notes shall be issued capturing all Fixes between the last Release and the end of the PoP.

ACCEPTANCE CRITERIA

Reference Section 9.

TASK 13 - FY2002 CFEIS MAINTENANCE

Task 13 is the FY2002 successor task to Task 10, and is therefore closed in the FY2003 PoP.

~~The Contractor shall begin Task 13 on October 1, 2001, or upon issuance of the modification to the TO implementing the accepted Project Plan for this SOW, whichever is later. FY2002 Maintenance is defined as sustaining CFEIS capability for MY2003 processing and adding CFEIS capability for MY2004 processing in support of the Certification and Fuel Economy Programs. The key enhancements for FY2002 are the implementation of CFEIS support for heavy duty engine chassis testing and for alternatively fueled vehicles.~~

~~Heavy Duty Chassis Testing~~

~~The Contractor shall modify CFEIS to allow the entry of chassis tests for Heavy Duty Vehicles. These vehicles have GVWR up to 14,000 pounds.~~

~~The same information shall be entered for these vehicles as for the current light duty vehicles in CFEIS (i.e. the same subsystems shall be used except that a new class of vehicle shall be added). Error range checks on weight fields and emission levels shall be adjusted. The vehicle class codes shall be expanded to include the Heavy Duty Engine (HDE) - Chassis as a category of vehicles.~~

~~Heavy Duty Chassis Testing shall not require fuel economy label or CAFE entry.~~

~~Heavy Duty Chassis Testing shall require a new certificate type.~~

~~Alternatively Fueled Vehicles (alt-fuel, ZEVs, HEVs & fuel cell vehicles)~~

~~The Contractor shall modify CFEIS to support certification, labeling, FE Guide entries, and Green Vehicle Guide entries of dual-fuel/flexible-fuel vehicles (alt-fuel), electric vehicles (ZEVs), hybrid electric vehicles (HEVs) and fuel cell vehicles. The Contractor shall :~~

- ~~Add 5 new fields to the General Label program, including fields for battery type, electric motor information, EPA driving range (in miles), and a linking code which links the (gasoline and alternative-fuel) Indexes of dual fuel and flexible fuel vehicles.~~
- ~~Revise the General Label output report for electric vehicles.~~
- ~~Add approximately 20 new codes or expanded ranges to current CFEIS fields.~~

~~EPA shall revise CMUG instructions for approximately 15-20 fields (text changes only).~~

These changes shall save many hours of CCD time currently spent manually editing the FE Guide, editing the Green Vehicle Guide, and generating certificates in Word Perfect. For example, the 2001 FE Guide listed 38 alternative-fuel model types, most of which were done by hand. The changes shall also save EPA resources, when providing information about these vehicles to others inside and outside of EPA, such as FOIA requests.

MY20054 Processing:

To maintain processing through MY20054, the contractor shall perform minor repairs and revisions to CFEIS. The Contractor shall propose in the Project Plan the process for supporting these changes, covering a degree of difficulty ranging from "patch" jobs (such as moving a field's location on a screen) to a major process revision. The plan should balance sustaining system integrity with minimizing the overhead associated with making a software change. In the context of the balance caveat, use of existing applicable SDC standards and guidelines (as cited in Attachment EPA-1) is required (do NOT reinvent the wheel), unless an exemption is granted by the TOPO in writing. Depending on the circumstances (i.e., a "Job One" emergency), the TOPO may choose to modify the production software base at NVFEL, in which case synchronization issues will arise. Or even under more routine circumstances, the EPA TOPO may choose to have EPA program changes, following the Configuration Management Plan.

The Contractor shall perform repair of software deficiencies ("bug hunts") and minor specification changes (field defaults, code table updates,...) identified and categorized in the Software Problem Change Report (SPCR) data base, prioritized in writing by the TOPO, and executed according to the SDC SEE procedures.

The Contractor shall, for the Project Plan, assume for Task 13

- no impact from existing, new or revised (after the date of the Plan) Rulemakings and associated guidance (CAP2000 IUVP is handled under Task 12);
- no data conversion shall be required;
- maintenance continues without interruption throughout FY20032, in parallel and coordinated with the other tasks (for example, the HD Chassis Testing and Alternatively Fueled Vehicles upgrades can be opened at the outset of the FY2002 PoP, but are not due until Release 6.5);
- MY20043 and MY20054 SPCRs may proceed in parallel and be implemented together;
- a stated size and severity mix of SPCRs for MY20043 and MY20054; and that
- SAIC performs all the work.

DELIVERABLES

13.1 Release 6.5: MY20043 Processing

Note: each installation of a Release (set of software modifications to CFEIS) shall be

~~accompanied by Release Notes as a separately tracked deliverable. The Release Notes shall follow SEE prescribed format and content, plus append the results of the Task 7.1 IVV tests run. Emergency Fixes shall be documented in the Release Notes accompanying the next Release. If no next Release is scheduled, a final Release Notes shall be issued capturing all Fixes between the last Release and the end of the PoP.~~

~~ACCEPTANCE CRITERIA~~

~~Reference Section 9.~~

TASK 14 - FY2003 CFEIS MAINTENANCE

Heavy Duty Chassis Testing

The Contractor shall modify CFEIS to allow the entry of chassis tests for Heavy Duty Vehicles. These vehicles have GVWR up to 14,000 pounds.

The same information shall be entered for these vehicles as for the current light duty vehicles in CFEIS (i.e. the same subsystems shall be used except that a new class of vehicle shall be added). Error range checks on weight fields and emission levels shall be adjusted. The vehicle class codes shall be expanded to include the Heavy Duty Engine (HDE) - Chassis as a category of vehicles.

Heavy Duty Chassis Testing shall not require fuel economy label or CAFE entry.

Heavy Duty Chassis Testing shall require a new certificate type.

Alternatively Fueled Vehicles (alt-fuel, ZEVs, HEVs & fuel cell vehicles)

The Contractor shall modify CFEIS to support certification, labeling, FE Guide entries, and Green Vehicle Guide entries of dual-fuel/flexible-fuel vehicles (alt-fuel), electric vehicles (ZEVs), hybrid electric vehicles (HEVs) and fuel cell vehicles. The Contractor shall :

- Add 5 new fields to the General Label program, including fields for battery type, electric motor information, EPA driving range (in miles), and a linking code which links the (gasoline and alternative-fuel) Indexes of dual fuel and flexible fuel vehicles.
- Add fields in ESI for partially variable valve lift, infinitely variable valve lift, variable valve timing, type of hybrid electric vehicle(series, parallel, plug-in, series, range extender, etc) type of fuel cell vehicle (series, parallel, APU, hybrid, etc) type of regenerative brakes (front, rear or all wheels). battery voltage, lean burn strategy, stratified charge, direct fuel injection, number and type of O2 sensors.
- Revise the General Label output report for electric vehicles.
- Add approximately 20 new codes or expanded ranges to current CFEIS fields.

EPA shall revise CMUG instructions for approximately 15-20 fields (text changes only).

These changes shall save many hours of CCD time currently spent manually editing the FE Guide, editing the Green Vehicle Guide, and generating certificates in Word Perfect. For example, the 2001 FE Guide listed 38 alternative-fuel model types, most of which were done by hand. The changes shall also save EPA resources, when providing information about these vehicles to others inside and outside of EPA, such as FOIA requests.

MY2005 Processing:

To maintain processing through MY2005, the contractor shall perform minor repairs and revisions to CFEIS. The Contractor shall propose in the Project Plan the process for supporting these changes, covering a degree of difficulty ranging from "patch" jobs (such as moving a field's location on a screen) to a major process revision. The plan should balance sustaining system integrity with minimizing the overhead associated with making a software change. In the context of the balance caveat, use of existing applicable SDC standards and guidelines (as cited in Attachment EPA-1) is required (do NOT reinvent the wheel), unless an exemption is granted by the TOPO in writing. Depending on the circumstances (i.e., a "Job One" emergency), the TOPO may choose to modify the production software base at NVFEL, in which case synchronization issues will arise. Or even under more routine circumstances, the EPA TOPO may choose to have EPA program changes, following the Configuration Management Plan.

The Contractor shall perform repair of software deficiencies (“bug hunts”) and minor specification changes (field defaults, code table updates, etc.) identified and categorized in the Software Problem Change Report (SPCR) data base, prioritized in writing by the TOPO, and executed according to the SDC SEE procedures.

The Contractor shall, for the Project Plan, assume for Task 14

- no impact from existing, new or revised (after the date of the Plan) Rulemakings and associated guidance (CAP2000 IUVP is handled under Task 12);
- no data conversion shall be required;
- maintenance continues without interruption throughout FY2003, in parallel and coordinated with the other tasks.
- MY2004 and MY2005 SPCRs may proceed in parallel and be implemented together;
- a stated size and severity mix of SPCRs for MY2004 and MY2005; and that
- SAIC performs all the work.

DELIVERABLES

~~13~~4.1 Release of MY2004 Processing - Schedule dates of completion 09/18/2003
14.2 Release for Heavy Duty Chassis - Scheduled dates to be determined

14.3 Release for Alternatively-Fueled Vehicles - Scheduled dates to be determined

Note: each installation of a Release (set of software modifications to CFEIS) shall be accompanied by Release Notes as a separately tracked deliverable. The Release Notes shall follow SEE prescribed format and content, plus append the results of the Task 7.1 IVV tests run. Emergency Fixes shall be documented in the Release Notes accompanying the next Release. If no next Release is scheduled, a final Release Notes shall be issued capturing all Fixes between the last Release and the end of the PoP.

ACCEPTANCE CRITERIA

Reference Section 9.

~~**TASK 15 - DISASTER RECOVERY PLANNING AND IMPLEMENTATION**~~

~~**Disaster Recovery Planning**~~

~~The contractor shall develop a plan that will allow for CFEIS data to be restored or imported for the use of EPA employees, in case of a disaster at NVFEL in Ann Arbor.~~

~~Background - Currently, both backups and export files are sent to an off-site location. EPA is required to come up with a disaster recovery plan. A disaster recovery plan is needed to allow EPA to access the CFEIS database when EPA staff can neither get back into NVFEL or another replacement site after 30 days following the disaster.~~

~~Contractor shall make available the ability to import and/or restore CFEIS applications for internal EPA use by utilizing electronic media provided by EPA. The contractor shall write a plan , which will be A plan will need to be written and agreed upon by both EPA and the SDC to put this contingency planning in place.~~

~~DELIVERABLES~~

~~145.1 Written Plan of how CFEIS data can be imported and accessed by EPA users - Scheduled dates of completion - 11/30/2002~~

~~145.2 Configuration of SDC hardware and software to make CFEIS data accessible in emergency. Scheduled dates of completion - TBD~~

7. **Reporting Requirements**:

7.1 Problem Notification

The Contractor shall verbally report problems immediately to the Task Order Project Officer, and document the verbal statement with a written notification within one full working day. The Contractor is allowed in the written notification to state that the problem requires further research to clarify or propose a solution, with a full report to be provided by a cited date.

Any circumstances that could affect the schedule of or the resources required for the project must be reported as soon as they are discovered. The TOPO will then notify the MOSES Team (CO, CS and PO).

7.2 Special Needs

See Section 2.4.

7.3 Milestones

Milestones are based on deliverables due throughout the development process. All Plan Milestones will be scheduled and tracked in the CSSR system (see Subtask 2.4).

7.4 Schedule

The schedule of deliverables shall be negotiated during the Project Plan process and tracked in the CSSR system. As noted above (in **Significant Events**) there are 3 key FY2002~~2~~3milestones for the CFEIS project:

- ~~11/30/2002 Requested completion date CFEIS Disaster Recovery Plan~~
- 06/21/2003 Requested completion date for Web Front-end screens for IOVCFEIS
- 09/18/2003 Requested completion date for MY2005
- ~~03/20/2002 Requested completion date for CFEIS Release 6.3 (Cert Streamlining)~~
- ~~06/19/2002 Requested completion date for CFEIS Release 6.4 (CAP2000 In Use)~~
- ~~09/18/2002 Requested completion date for CFEIS Release 6.5 (MY2004)~~

Attachment EPA-4 contains the Schedule for the Deliverables stated in this SOW. The DUE DATE column for each deliverable contains either a firm date, TBD (firm date to be set in the Project Plan), or As Required (authorized in writing by the TOPO). Note that the schedule for Task 1.3.1 Project Plan is contingent upon the Contractor receiving the SOW; and the schedule for Task 2.1.2 is contingent on a CCB occurring.

8. **Other Requirements**:

a. Guidelines/Standards: Task order specific documents are cited in Section 4.c. and its referenced appendices. From time to time the additional following guidelines *may* be provided:

1. PA ADP System Design and Development Guidance, 4 volumes and 2 supplements.
2. OSWER System Life Cycle Guidance.
3. IEM™ Handbooks.
4. EPA Common User Interface Standards (Draft).
5. EPA Information Technology Architecture Roadmap.
6. GIS Workstation Implementation Guidelines (August 1991) (Draft).
7. EPA IRM Policy Manual.
8. NDPD Policy Manual.
9. ADABAS Policies, Procedures and Standards.
10. EPA Hardware and Software Standards.
11. Revised OMB Circular A-130, Appendix III
12. EPA Information Security Manual
13. NIST User Guide for Developing and Evaluating Security Plans for unclassified
14. Federal Automated Information Systems (DRAFT).
15. EPA SDC Systems Engineering Environment
16. Government Performance and Results Act,
17. Clinger-Cohen Act of 1996
18. Government Paperwork Elimination Act

b. Distribution requirements:

For purposes of estimation, the Contractor shall provide to the TOPO for each deliverable document or working paper the following items:

- cover letter, executive summary, Deliverable Receipt, Acceptance Form
- if a text document, 1 electronic copy in Word Perfect 8.0 via electronic mail ~~+ 2 hard copies~~
- if a CSSR, 1 electronic copy in Microsoft Project 98 + 1 ~~2~~ hard copies
- if a deliverable or working paper visibly impacts a stakeholder group (CFEIS interface to Manufacturers, CFEIS reports used by ATD, etc), then after TOPO authorization in writing provide a Summary targeted to the stakeholder group for distribution by the TOPO.
- deliverable version history

The exception to the above guidance are those deliverables for which SDC package guidance already exists, such as the Project Plan and the Technical & Financial Progress Report. These default deliverable package guidelines can be superseded by mutual agreement in writing (such as in CCB Minutes) between the TOPO and the Contractor, but the changes can not affect the estimated cost of the Plan.

The Contractor shall provide and install all code on the EPA development and production systems per the procedures employed by the Task covering the code and accepted in writing by the TOPO.

c. Security and Access(s):

Security requirements for this project will be determined by the EPA TOPO in writing. Reference Section H.14 regarding the Treatment of Confidential Business Information (EPAAR 1552.235.71) (April 1984). If confidential information is accessed, the contractor will protect from unauthorized disclosure all confidential information handled in the performance of this project in accordance with

(1) EPA policy and procedures relating to confidential information,
(2) the EPA security plan for this project, and
(3) the SDC security plan as it relates to the handling of confidential information.

With respect to (3), the Contractor will maintain security and confidentiality of all EPA data, test data, software, and code. The CFEIS system contains information provided by the automotive industry to EPA. Some of the data and information provided may be considered Confidential Business Information (CBI) of the automotive manufacturers regulated by EPA. The contractor and subcontractors performing the CFEIS design, development and maintenance tasks under this Task Order may from time to time require incidental access to some of the CFEIS data which may be CBI. All of this data and information must be kept confidential and secure by the contractor. The contractor shall have each contractor and subcontractor staff member working on this Task Order sign the attached EPA Confidentiality Agreement (Attachment EPA-2). EPA will publish a notice in the Federal Register identifying the contractor and subcontractor company names which will have access to CFEIS information. EPA will limit all access to confidential CFEIS information on a need to know basis.

EPA defines all Agency information as sensitive. Even if the TOPO decides that no confidential information will be accessed on this project, the contractor must ensure that all Agency information is safeguarded during the performance of this project in accordance with

(1) EPA information security policy and procedures,

(2) the security plan for this project, and
(3) the SDC security plan as it relates to protecting EPA information resources.

Electronic Data Interchange (EDI) files and data may be read by contractor support staff with EPA controlling, monitoring and limiting update and alter access. Also, an IBM package, Resource Access Control Facility (RACF), is used to protect any mainframe files associated with this project. The contractor shall request mainframe, and /or UNIX access from the TOPO as required. The contractor shall notify the TOPO of any employee who has left the project. This notification is necessary so that the TOPO can cancel the employees access to all data sets related to this project. Failure to do so may be regarded as a breach of CFEIS security if the TOPO is not notified by the last day of employee's service.

9. Acceptance Criteria

REQUIRED SERVICE	STANDARDS
Task 1 Subtask 1.1 1.1.1 Project Plan	1. Meets requirements 2. Estimate ceiling accepted 3. Meets Clause G.1
Task 1 Subtask 1.2 1.2.1 Updated Plan	1. Meets requirements 2. Estimated ceiling accepted 3. Meets Clause G.1
Task 1 Subtask 1.3 1.3.1 Revised Plan	1. Meet requirements 2. Estimated ceiling accepted 3. Meets Clause G.1
Task 2 Subtask 2.1 Manage TO 2.1.1 Product Assurance	1. Address each deliverable 2. Clearly states review steps 3. Provides adequate review time 4. Deliverables (documentation, releases, deployment etc.) meet specifications, systems are fully tested for operation, quality of output is consistent, software is free of significant software malfunctions)
Task 2 Subtask 2.1 2.1.2 Documentation of CCB	Accepted if they correctly and completely describe the activities recorded in the CCB meetings
Task 2 Subtask 2.1 2.1.3 Monthly Technical and Financial Reports	Accepted if they meet the contract requirements.
Task 2 Subtask 2.2	Timely and accurate list of deliverables Note: TO 005 has no EPA property.
Task 2 Subtask 2.3 2.3.1 Transition Plan: Documentation, Security, Training and Management. Document Inventory and Disposal; Training Materials; Security Plan, Schedule of Transition Activities, Transition Results Report	Accurate inventory, thorough, clear, well-organized effective transition to EPA or another contractor, successful transition of work to the succeeding contractor
Task 2 Subtask 2.4 2.4.1 Cost Schedule Status Reports	The CSSR will be accepted if it follows the agreed upon template, is complete, current and mathematically accurate, and provides an achievable get well plan for all budget and / or schedule variances, as defined above. Note that significant budget (10+% under) and / or schedule (10+% ahead) variances in the other direction should also be documented, both as “success stories” and as opportunities for improvement on the overall budget and schedule plan.

Task 3 3.1 Configuration Management Plan	The CM Plan shall be accepted if it conforms to SDC standards for configuration management as follows: - It implements a CM Program consistent with the Policies, Guidelines, Procedures, and Standards of the SDC under the MOSES II contract (newer versions of the documents cited below shall apply): • SDC Product Development Process, SDC-0055-028-JS-2055B/June 1999 • SDC Change Control Board, SDC-0055-028-SS-2052 - It shall identify CM objectives and activities necessary to ensure contractually compliant and cost-effective product development practices that result in a reliable and maintainable product.
Task 3 3.2 Oracle & Solaris Products Upgrade	CFEIS run on the upgraded Oracle & Solaris Products Environment shall pass the Product Assurance regression test bed for the production version of CFEIS at the time of the upgrade.
Task 4 is closed.	Completed in FY1999 PoP.
Task 5 is closed.	Completed in FY1999 PoP.
Task 6 is closed.	Completed in FY2000 PoP.
Task 7 7.1 Y2K Certification Test Runs	The test runs shall run to completion and specified reports shall meet content standards per CFEIS documentation on file at the SDC TSC.
Task 7 7.2 Y2K SPCR(s) Implementation	CFEIS shall be demonstrated to be a "system that is capable of processing date data according to EPA's data standard for representation of calendar dates".
Task 7 7.3 CFEIS Section 508 Assessment Report	CFEIS shall be demonstrated to be a "system that is compliant with "508" guidelines according to federal regulations.
Task 8 8.1 Updated Requirements Traceability Matrix	All changes to the RTM shall refer back to the authorizing SPCR(s).
Task 9 9.1 Auto Emissions Web Site design analyses	The Contractor shall respond to the design requirements and issues as cited in writing by the TOPO or captured in the Minutes by the Contractor from CCB or Teleconference sessions with the TOPO. The response shall consist of one or more technical recommendations and associated labor estimates, if code changes are proposed.

Task 9 9.2 Auto Emissions Web Site Modifications	- The Contractor shall complete all Web Site Modifications per the standards and procedures of the SDC SEE. This criterion includes Release Notes per the SEE covering all SPCRs installed with the Release or with the Emergency Fixes since the last Release. - The base criterion is that software performs as specified. - Otherwise, the TOPO ranks ease of use (as defined in the CCB) over exploitation of the technology underpinning the web site and "best industry practice".
Task 10 is closed.	Completed in FY2001 PoP.
Task 11 11.1 Release 6.3: Automated Confirmatory Test Selection	See below for "Software Acceptance Criteria."
Task 12 is closed ~~12.1 Release 6.4: CAP2000 Rule In-Use Verification Program~~	~~See below for "Software Acceptance Criteria."~~ Completed in FY2002 PoP.
Task 13 is closed ~~13.1 Release 6.5: MY2004 Processing~~	~~See below for "Software Acceptance Criteria."~~ Completed in FY2002 PoP.
Task 14 14.1 MY2005 Processing	See below for "Software Acceptance Criteria."
~~Task 15 Disaster Recovery~~	~~Disaster recovery plan should be consistent with EPA and OTAQ contingency planning.~~

Software Acceptance Criteria:

- The Contractor shall complete all Software Modifications per the standards and procedures of the SDC SEE. This criterion includes Release Notes per the SEE covering all SPCRs installed with the Release or with the Emergency Fixes since the last Release.
- The base criterion is that software performs as specified.
- Otherwise, the TOPO ranks ability to meet regulatory requirements and ease of use (as defined in the CCB) over exploitation of the technology underpinning the system and "best industry practice".

ACRONYMS

ACGM	Automated Certificate Generation by Manufacturers
ACTS	Automated Confirmatory Test Selection
API	Application Programming Interface
ATD	OTAQ Advanced Technology Division at NVFEL
CAA	Clean Air Act
CAP2000	Compliance Assurance Program <for implementation in MY> 2000
CAFÉ	Corporate Average Fuel Economy
CASE	Computer Aided Software Engineering
CBI	Confidential Business Information
CCB	MOSES TO Change Control Board
CD	Compact Disk
CCD	Certification and Compliance Division
CFEIS	Certification and Fuel Economy Information System
CFR	Code of Federal Regulations
CIS	Compliance Information System
CM	Configuration Management
CMUG	CFEIS Manufacturers' User Guide
CO	MOSES Contract Officer
COTS	Commercial Off The Shelf <uncustomized commercially sold software >
CSSR	Cost Schedule Status Report
DO	Delivery Order
DOT	Department of Transportation
EAP	Electronic Application Processing
EDI	Electronic Data Interchange
EIMS	Engine Information Management System
EPA	Environmental Protection Agency
EPCA	Energy Policy and Conservation Act
FOIA	Freedom Of Information Act
FTP	Federal Test Procedure (when discussing emissions testing procedures)
FTP	File Transfer Protocol (when discussing manufacturer data submission options)
GVG	Green Vehicle Guide
GVWR	Gross Vehicle Weight Rating
HDE	Heavy Duty Engine
HDS	Heavy Duty System
HEV	Hybrid Electric Vehicles
IOV	Initial Operating Version (of CFEIS)
IST	Information Systems Team
IT	Information Technology
IUVP	In-Use Verification Program
IVV	Independent Verification and Validation
LAN	Local Area Network
LCS	NVFEL's Laboratory (real time) Computer System

ACRONYMS

LDT	Light Duty Trucks
LDV	Light Duty Vehicles
LEV	Low Emission Vehicle
LOD	Laboratory Operations Division
MC	Motorcycles
MOSES I	Mission Oriented Systems Engineering Support Contract I (68-W1-0055)
MOSES II	Mission Oriented Systems Engineering Support Contract II (68-W-99-002)
MRC	Minor Requirement Change
MTS	Michigan Terminal System (operating system of old CFEIS's platform)
MVICSA	Motor Vehicle Information and Cost Savings Act
MY dddd	Model Year dddd (vehicle production model year dddd, as in MY 2000)
NVFEL	OTAQ National Vehicle and Fuel Emissions Laboratory at Ann Arbor, MI
NLEV	National Low Emission Vehicle
NOx	Nitrogen Dioxide
OAR	Office of Air and Radiation
OTAQ	Office of Transportation and Air Quality
PA	Product Assurance
PMN	Program Management Network
PO	MOSES Project Officer
PoP	Period of Performance
RACF	Resource Access Control Facility
RDBMS	Relational Data Base Management System
RTM	Requirements Traceability Matrix
SDC	MOSES II Contractor's Systems Development Center
SEE	System Engineering Environment
SFTP	Supplemental Federal Test Procedure
SOW	Statement of Work
SPCR	Software Problem Change Report
SSIN	Summary Sheet Index
TBD	To Be Determined
TO	Task Order
TOPO	CFEIS Task Order Project Officer
TSC	Technical Support Center (at the SDC)
VID, VIN	Vehicle Identification Number
WBS	Work Breakdown Structure
Y2K	Year 2000
ZEV	Zero Emission (electric) Vehicles